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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,418	10/20/2003	Yen-Jung Hu	251104-1020	2799
24504	7590	12/20/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			KIM, SUN U	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,418

Applicant(s)

HU ET AL.

Examiner

John Kim

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1723

1. Applicant's election of Group I (claims 1-9) in the reply filed on 10/24/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogata et al (US Pat. No. 5,503,745). Ogata et al teach a cylindrical or tubular pleated non-woven fabric filter medium having a maximum pore size of 120 microns wound up onto a hollow cylindrical or tubular metal core with large number of holes and a metal end surface-sealing member having an opening part of a diameter of 30 mm at both ends and sealing both end parts of the medium and metal core to inherently leave a hollow space in the hollow metal core (abstract; col. 2, lines 56-67; col. 7, line 62 – col. 8, line 15; col. 10, lines 8-32).

4. Claims 1-3, 5, 7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Olsen (US Pat. No. 6,315,130). Olsen teaches a fluid filter comprising a cylindrical or tubular pleated non-woven fabric filter medium (20) having a pore size of 0.2 to 70 microns supported by an inner cylindrical or tubular pleated diffusion media (24) made of spunbond non-woven polypropylene fabric or a hollow cylindrical or tubular core (12) with openings to permit the

Art Unit: 1723

passage of fluid between the outside and the center of the core and the end caps (30) attached to the filter element (10) comprising the filter medium (20) and diffusion media (22, 24) and the core (12) to seal two ends of the filter medium and the core with an epoxy (figure 2; col. 4, lines 21-41; col. 11, line 63 – col. 12, line 54; col. 12, line 55 – col. 13, line 18; Table IV (see filter rating); col. 14, lines 28-33; col. 14, line 55 – col. 15, line 16).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen. Olsen teaches a fluid filter as described in above paragraph 3. Claim 4 essentially differs from the filter of Olsen in reciting that the porous tubular supporting portion has a mean pore size of 100 micron to 3 mm. Olsen teaches that the cylindrical core (12) has openings (26) formed through the core to permit the passage of fluid between the outside and the center of the core wherein these openings (26) are inherently larger than the pore rating of the filter medium (see figure 2; Table IV (see filter rating); col. 14, lines 55-64). It would have been an obvious matter of design choice to modify the mean pore size of the core (12) of Olsen to 100 micron to 3 mm, since applicant has not disclosed that such claimed range of pore size solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any mean pore size of the core so long as the mean pore size of the core is larger than the pore size of the filter medium to permit the passage of fluid between the outside and the center of the core.

Art Unit: 1723

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen as applied to claim 1 in above paragraph 4, and further in view of Derwent Abstract of Japanese Patent No. 3-169311 (hereinafter referred to as JP '311). Olsen teaches a fluid filter as described in above paragraph 3. Claim 6 essentially differs from the filter of Olsen in reciting that the tubular supporting portion is a porous plastic tube. Olsen teaches that cylindrical core (12) may be of conventional design and may be made of any material having sufficient strength and which is compatible with the fluid being filtered (see col. 14, lines 55-62). JP '311 teaches a filter comprising a non-woven fabric filter layer wound around the periphery of a cylindrical porous core wherein the core is made of polyolefin, nylon or stainless steel (see abstract; figure 1). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cylindrical core of Olsen with any of known material including plastic e.g. polypropylene for filter support as suggested by JP '311 depending on the desired strength and compatibility with fluid being filtered.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen as applied to claim 1 in above paragraph 4, and further in view of Spafford et al (US Pat. No. 5,173,186). Olsen teaches a fluid filter as described in above paragraph 3. Claim 8 essentially differs from the filter of Olsen in reciting a filter module comprising a plurality of the claimed non-woven filter in claim 1. Spafford et al teach a filter module comprising a housing containing a plurality of filter cartridges having a tubular pleated non-woven filter (26) with a porous tubular core (28) placed within the filter (26) (see figures 1-3; col. 2, lines 45-50; col. 3, lines 19-64). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to

Art Unit: 1723


include a plurality of non-woven filter of Olsen in a housing to increase the filtering capacity of fluid to be filtered by increased number of filters.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents in PTO-892 teach various nonwoven filter or membrane filter with supporting tubular perforated core.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (571) 272-1142. The examiner can normally be reached on weekdays from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Kim
Primary Examiner
Art Unit 1723

J. Kim
December 14, 2005